

Please type a plus sign (+) inside this box ☐

PTO/SB/01 (11_00)

Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

BP3018

First Inventor

Ba-Zhong Shen, Ph.D.

Title

16 QAM AND 16 APSK TCM (TURBO TRELLIS CODED
MODULATION) WITH MINIMUM BANDWIDTH OF 3 BIT/S/Hz

Express Mail Label No.

EV 082608767 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents

ADDRESS TO:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☒ Fee Transmittal Form (e.g. PTO/SB/17)
(submit an original and a duplicate for fee processing)

2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.

3. ☒ Specification [Total Pages (preferred arrangement set forth below)

- Descriptive title of the invention
- Cross Reference to Related Applications
- Statement Regarding Fed sponsored R&D
- Reference to sequence listing, a table, or a computer program listing appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

4. ☒ Drawing(s) (35 U.S.C. 113) [Total Pages

5. Oath or Declaration [Total Pages

- a. ☒ Newly executed (original or copy)
Copy from a prior application (37 CFR 1.63 (d))
- b. ☐ (for continuation/divisional with Box 18 completed)

i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR
1.63(d)(2) and 1.33(b).

6. ☐ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or
Computer Program (Appendix)

8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)

a. ☐ Computer Readable Form (CRF)

b. Specification Sequence Listing on:

i. ☐ CD-ROM or CD-R (2 copies); or

ii. ☐ paper

c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & documents(s))

10. ☒ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney

11. ☐ English Translation Document (if applicable)

12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations

13. ☐ Preliminary Amendment

14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)

15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)

16. ☐ Request and Certification under 35 U.S.C. 122
(b)(2)(B)(i). Applicant must attach form PTO/SB/35
or its equivalent.

17. ☒ Other: PTO-2038 Forms for \$1500 and \$40. LOA.....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: _____

Prior application information: Examiner: _____ Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

☒ Customer Number or Bar Code Label
insert customer no. or attach bar code label here or ☒ Correspondence address below

Name Shayne X. Short, Ph.D.

Address P.O. Box 160727

City Austin

State TX

Zip Code 78716-0727

Country USA

Telephone (512) 825-1145

FAX (512) 394-0054

Name (Print/Type) Shayne X. Short, Ph.D.

Registration No. (Atty/Agent)

45,105

Signature

Date

8/7/2003

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

Please type a plus sign (+) inside this box ☐

PTO/SB/17 (11_00)
Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$) \$1540.00

Complete if Known

Application Number	
Filing Date	
First Named Inventor	Ba-Zhong Shen, Ph.D.
Examiner Name	
Group Art Unit	
Atty Docket No.	BP3018

METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number	
Deposit Account Name	

- ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
- ☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☒ **Payment Enclosed:**

☐ Check ☒ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Fee Description	Fee Paid
Utility filing fee	750.00
Design filing fee	
Plant filing fee	
Reissue filing fee	
Provisional filing fee	
SUBTOTAL(1)	(\$) 750.00

2. EXTRA CLAIM FEES

Fee From Below

	Extra Claims	Fee Paid
Total Claims	57	
Independent Claims	20** 37 X 18 =	666.00
Multiple Dependent	4 -3** 1 X 84 =	84.00

Fee Description

Claims in excess of 20

Independent claims in excess of 3

**Reissue independent claims over original patent

**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 750.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3.. ADDITIONAL FEES

Fee Description

Surcharge-late filing fee or oath

Surcharge- late provisional filing fee or or cover sheet

Non-english specifications

For filing a request for ex parte reexamination

Requesting publication of SIR prior to Examiner action

Requesting publication of SIR after Examiner action

Extension for reply within first month

Extension for reply within second month

Extension for reply within third month

Extension for reply within fourth month

Extension for reply within fifth month

Notice of Appeal

Filing a brief in support of appeal

Request for oral hearing

Petition to institute a public use proceeding

Petition to revive - unavoidable

Petition to revive unintentional

Utility Issue Fee (or reissue)

Design Issue Fee

Plant Issue Fee

Petitions to the Commissioner

Processing fee under 37 CFR 1.17(q)

Submissions of Information Disclosure Stmt

Recording each patent assignment per property (times number of properties)

Filing a submission after final rejection (37 CFR 1.129(a))

For each additional invention to be examined (37 CFR 1.129(b))

Request for Continued Examination (RCE)

Request for expedited Examination of design application

Other fee (specify)

Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

\$40.00

SUBMITTED BY

Complete (if applicable)

Name (Print Type)	Shayne X. Short, Ph.D.	Registration No. (Attorney Agent)	45,105	Telephone	(512) 825-1145
Signature	<i>SX Short</i>	Date	8-7-2003		

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231



BROADCOM CORPORATION
16215 Alton Parkway
Irvine, California 92618

Phone: 949-450-8700
Fax: 949-450-8710

May 20, 2003

To whom it may concern:

I, Henry Samueli, hereby authorize Dee Henderson, Intellectual Property Portfolio Manager, to execute documents relating to US and foreign patent and trademark matters on behalf of Broadcom Corporation and/or its subsidiaries.

A handwritten signature in cursive script, appearing to read 'H Samueli', is written over a horizontal line.

Henry Samueli, Ph.D.
Chief Technical Officer and Co-Chairman